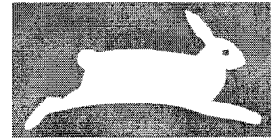


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May 13, 2004

Michael O. Leavitt, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building (1101A)
1200 Pennsylvania Ave., N.W.
Washington, DC 20460



PETA

PEOPLE FOR THE ETHICAL
TREATMENT OF ANIMALS

HEADQUARTERS
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Re: Comments on the HPV test plan for methylcyclopentadienyl
manganese tricarbonyl (MMT)

Dear Administrator Leavitt:

The following comments on the American Chemistry Council (ACC) test plan for MMT (CAS no. 12108-13-3) are submitted on behalf of People for the Ethical Treatment of Animals, the Physicians Committee for Responsible Medicine, the Humane Society of the United States, the Doris Day Animal League, and Earth Island Institute. These animal, health and environmental protection organizations have a combined membership of more than ten million Americans.

On the assumption that the top two lines on page 7 of the test plan are a mistake, the ACC plans to conduct an acute toxicity test on fish (OECD no. 203). This test will kill at least 120 fish.

A fish test is premature given the fact that there are apparently no data available for MMT hydrolysis. Clearly, if MMT hydrolyzes very rapidly, aquatic toxicity tests will be unnecessary. The test plan states that "the potential for MMT to hydrolyze will be characterized in a technical discussion" (p. 6). The fish test plans should therefore be postponed until after that discussion.

However, our central objection to the fish test is that it is difficult to envisage the data generated having any real-world relevance. The sole use for MMT is as a gasoline anti-knocking additive, and almost all contamination of seas, lakes and watercourses by MMT is therefore due to large- or small-scale gasoline spillage. The ACC acknowledges the possibility of exposure to undiluted MMT of workers involved in MMT manufacturing and blending (p. 5), but it is far more difficult to imagine how water bodies could be contaminated in this manner. Indeed, the ACC states that exposure of the "general population" to undiluted MMT is "not reasonably expected to occur" (p. 5) and the same presumably applies to natural water bodies. However, the ACC states that gasoline contains no more than 40 ppm manganese [according to the EPA, the legal limit in the USA is 0.03125 g manganese per gallon (Kortum 2003), equivalent to 11.5 w/w ppm, assuming the weight of gasoline to be 6 lb/gallon], and that at this dilution the solution has effectively no toxicity other than that of the gasoline (p. 4). Therefore, the effect of MMT on fish populations after gasoline spillage is purely academic, particularly since gasoline causes severe physical fouling in addition to toxicity.

The EPA and environmental organizations would be making a far more efficient use of their resources were they to lobby gasoline manufacturers, distributors, and users to reduce spillage, instead of encouraging the ACC to carry out pointless experiments of the type proposed in this test plan.

A further point to note is that studies involving the exposure of fish to MMT have in fact been carried out previously by a group of Canadian researchers. The published report is on the accumulation of organic and inorganic manganese in sediments, plants, and fish, and does not mention toxicity (Garrec 1985), but the researchers should be contacted for information as to whether toxicity was observed, especially since the accumulation in fish was quite high (above 30 ppm after exposure for 9 days).

Finally, if the ACC nevertheless wishes to investigate the fish toxicity of MMT, we must once again point out that several available *in vitro* and *in silico* methods for measuring fish toxicity are available. Several quantitative structure activity relationship (QSAR) programs for estimating fish toxicity are available, and the EPA itself encourages the use of one QSAR: ECOSAR (EPA 2002). The protozoan-based *in vitro* method TETRATOX (Larsen 1997) gives results similar to toxicity in the fathead minnow (Schultz 1997). TETRATOX is thus an effective alternative to fish testing and is used extensively in industry. An additional *in vitro* method is the *DarT* test, based on fertilized zebrafish eggs (Schulte 1994, Nagel 1998), which has been shown to be reliable by the German Environmental Protection Agency, is now in regulatory use in Germany (Schulte 1996, Friccius 1995), and is being proposed for international acceptance as an OECD guideline. We hope you will not hesitate to contact us if you would like further information about any of these methods.

Sincerely,

Jessica Sandler
Federal Agency Liaison

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